**Food and Agriculture Organization
of the United Nations**

Measuring inadequate employment in Kenya: field test report for Decent Work within an agricultural context in developing countries

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Acronyms

FAO	Food and Agricultural Organization of the United Nations
GSARS	Global Strategy to improve Agricultural and Rural Statistics
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
KBNS	Kenyan Bureau of National Statistics
SUST2	Sustainability 2 – Decent Work in Agriculture

Acknowledgements

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Introduction and background

The objective of the research component of the Global Strategy to improve Agricultural and Rural Statistics (GSARS) is to develop cost-effective methods for agricultural statistics that can serve as the basis for preparing handbooks and training material for use by country statisticians. The GSARS line of research on "Sustainability 2 – Decent Work in Agriculture" (SUST2) is focused on developing a methodology for collecting data on Decent Work within an agricultural context in developing countries.

The framework for the measurement of Decent Work was adopted by the Eighteenth International Conference of Labour Statisticians (ICLS), held in 2008 in Geneva, Switzerland, and published in December 2013 in the International Labour Organization (ILO) report entitled *Decent Work Indicators Guidelines for Producers and Users of Statistical and Legal Framework Indicators*. The Guidelines contain 60 statistical indicators within ten substantive areas that are closely linked to the four objectives of the Decent Work Agenda: (1) international labour standards and fundamental principles and rights to work; (2) employment creation; (3) social protection; and (4) social dialogue and tripartism. Twelve additional indicators cover the socio-economy as a whole under the substantive area of *Economic and social context for Decent Work*. The Decent Work framework was designed to be applied across the entire labour market; however, it fails to cover certain specificities of the agricultural sector within a developing country context, which makes the application of a number of Decent Work indicators problematic. Nonetheless, it serves as the international standard and basic starting point for the SUST2 line of GSARS research.

A technical report has been drafted that contains a description of some of the challenges encountered in applying the ILO Decent Work framework, an assessment of recent initiatives to collect data on Decent Work in the agricultural context, and proposed methods for integrating data collection on Decent Work in agriculture into national statistical systems (Discenza, Nico and Rahija, 2018). Building upon this report, additional literature and the results of a field test, guidelines on measuring Decent Work in agriculture are being developed. The

purpose of the guidelines will not be to suggest indicators and a methodology to be fully assimilated into the current Decent Work framework, ***but rather to propose indicators that fit within the context of agriculture and small family farms within a developing country that supplement the current framework***.

The guidelines will place a special emphasis on youth, which is an important dimension of the Decent Work framework. While many of the Decent Work indicators can be disaggregated by age, there are two indicators specific to youth in the framework: (1) the share of youth not in employment, education, or training (15–24 years of age), or the NEET rate; and (2) the youth unemployment rate (15–24 years of age) (ILO, 2013). Additional indicators are required to fully understand youth employment and work within this context.[1] In developing countries where there is a large rural population, poverty is largely in rural areas and many rural households engage in agricultural production – as is the case with many countries in sub-Saharan Africa – the employment indicators tend to overestimate the performance of the labour force for youth (Filmer and Fox, 2014). Although there is variation, within many developing agrarian countries, unemployment is low even among youth because many cannot afford to be unemployed (Filmer and Fox 2014; Baah-Boateng, 2015; Dewan and Peck, 2007). Individuals who cannot afford to be unemployed find work in whatever way they can – for example, street vending, food stands, shoe shining – as a preferable alternative to unemployment. In this context, a more revealing indicator of labour force performance than youth unemployment and the NEET rate is underemployment. Oya (2015) argues that decent estimates of underemployment would be useful for understanding Decent Work within such a context and "probably [should be a] priority in contexts where full-time permanent employment is the exception and irregular employment the norm." Based on this view, measures of different dimensions of underemployment within this context were proposed and field-tested in Kenya in July and August 2017. The focus was on youth employment; however, the field test captured underemployment for all adults and youth.[2]

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[1] ABOL-1 (child labour rate), ABOL-2 (hazardous child labour rate), and ABOL-3 (rate of the worst forms of child labour other than hazardous work) include children and young people aged 15–17 years who are working more than 42 hours a week on a regular basis, work in a designated hazardous industry or occupation, or work in forced or bonded labour, in armed conflict, or in sexually exploitive or illicit activities. CONT-1 (children not in school) also includes young people (in addition to children), although the exact ages depend on the age bands for the education in the specific country.

[2] To disaggregate youth by – for example – sex, job entitlements, and employment status of those employed required a larger sample size, which was not feasible with the budget available.

The report is organized as follows: the next section provides the motivation for additional measures of underemployment within the agricultural sector in a developing-country context and describes the three proposed indicators. This is followed by a description of the Kenya context and a discussion of the implementation of the field test and data. The final sections include discussions of the results from the field test, as well as preliminary recommendations for capturing underemployment in a developing agrarian country within the context of Decent Work.

Motivation for field test and proposed underemployment indicators

The definition of underemployment adopted by the Sixteenth ICLS in 1998 includes inadequate employment and time-related unemployment. Inadequate employment is defined as the desire to change one's current employment situation based on a lack of well-being and the inability to maximize one's capabilities conditional on being able to change jobs (Wilkens and Wooden, 2009). This is a conceptually challenging definition to use in developing a statistical measure in that, the definition is all-encompassing. Accordingly, the ILO seems to have steered away from developing a measure based on the above definition, endorsing instead the development of indicators to measure specific aspects of underemployment, such as mismatches in skills or ability, excess working hours, and hourly income (Wilkens and Wooden, 2009).

To date, time-related underemployment is the only component of underemployment that has been agreed upon and properly defined by the ICLS. The time-related underemployment indicator (TIME-4) within the Decent Work framework is defined as the share of employed individuals "who, during a short reference period, wanted to work additional hours, whose working time in all jobs was less than a specified hours threshold, and who were available to work additional hours given an opportunity for more work (ILO, 2013).

Time-related underemployment aims to estimate an aspect of the underutilization of labour. However, given that in many developing countries, individuals often work longer hours than a nationally determined threshold, the time-related indicator may not capture well underutilization of labour in that context (Bescond, Chataignier and Mehran, 2003). Additionally, in an agricultural context, a short reference period rather than an average over time may over- or underestimate underemployment,

depending on timing in the agricultural season.[3] The ILO is conducting a pilot study that focuses in part on measures of underutilization, where underutilization is the sum of the time-related underemployed, the unemployed, and a subgroup of individuals outside the labour force (hidden unemployment). As part of this endeavour, additional approaches to capturing time-related underemployment are being tested that would be more suitable for developing countries, such as using the usual hours worked rather than the hours based on a shorter reference period. Nevertheless, additional underemployment measures that better fit this context are needed.

Recognizing this, GSARS has piloted three proposed inadequate employment measures that fit within this context, to be compared with the time-related underemployment measure. The first proposed measure is based on an assessment of skills such as education, skills training, and work experience. While this measure is already well established in the academic literature, it is included here because social policies have focused on education in youth polytechnics and skills development programmes as a way to promote youth employment in Kenya (Balwanz, 2012). It is measured by identifying the skill requirements of different jobs and measuring these against the skill levels of individual workers. If the skill level of the individual is greater than the skill level required for the occupation, the individual is considered underemployed. [4] For the field test, the ISCO-08 skill level classification for the sub-major occupation groups was used. The classification incorporates the International Standard Classification of Education (ISCED-97) to classify the formal education required and the informal and on-the-job training requirements of the individuals' main job.[5]

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[3] The short reference period is often specified as one week.

[4] See, for example, Brown and Pintaldi (2005).

[5] In Kenya, individuals are assigned an ISCED level 1 if they have completed the first stage of primary education or, if they have no educational qualification but can read and write, have an industry-recognized or government certificate, received skills training or completed an apprenticeship. An individual is assigned an ISCED level 2 if he or she has successfully completed pre-secondary or post-primary education and obtained the Kenya Certificate of Primary Education. An individual is assigned an ISCED level 3 if he or she has completed the final stage of secondary education. Qualification for level 3 in Kenya includes a polytechnic craft trade certificate and the East Africa Certificate of Education, the Kenya Junior Certificate of Secondary Education, the Kenya Certificate of Secondary Education, the East Africa Advanced Certificate of Education or the Kenya Advanced Certificate of Education. An individual is assigned an ISCED level 4 if he or she has attained a post-secondary, non-tertiary education and received the TIVET Post-Secondary Certificate or Diploma. From an international point of view, these programmes are between upper secondary and post-secondary education, even though they may classify as post-secondary programmes in Kenya. An individual is assigned an ISCED level 5 if he or she has earned an undergraduate or

This approach captures the mismatch between the skill required for an occupation and the skill level of an individual as a way to estimate loss of productivity based on workers' overqualification for a job. Overeducated workers are likely to bring a lower value added to the economy than may be expected considering their education, as they are trapped in low-productivity types of occupations.

The approach of using ISCED education-level classifications against ISCO occupational classifications is simple and allows for cross-country comparisons. It does not capture, however, the mismatch between the fields of education and occupation, which is more data-intensive. This means, for example, that an individual who is employed as a casual wage labourer in agriculture, but who has acquired a teaching certificate for primary education is considered underemployed even if he or she has little experience in agriculture. It also does not fully capture on-the-job skill training, with the exception of apprenticing. Consequently, it may underestimate the skill level of those who have little education but many years of experience in an occupation.

Similar to the time-related indicator, the skills-based underemployment indicator captures the underutilization of labour in employment. These indicators do not conceptually capture, however, individuals who are employed out of necessity because the lack of other options makes their current occupation the only alternative to unemployment. In other words, it does not capture those who would be unemployed if social safety nets were in place for the unemployed, as they are in many developed countries. An additional critique is that in this context, individuals may not have one primary form of employment but instead combine multiple paid-work activities over time because of the irregularity of available work, a lack of adequate regular employment opportunities, the seasonality of agricultural work, or the need to mitigate risks from agricultural income. In such a situation, basing measures on the main job over a short reference period may result in different estimates depending on when the survey is administered, as the individual's main job may change throughout the year. Seasonal work may result in long hours in agriculture at some times, while at other times, individuals may work a greater number of hours in other types of work.

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postgraduate diploma, or a certificate from a college, including a teaching certificate. ISCED level 6 is reserved for graduates of tertiary programmes that lead to advanced research qualification, such as a doctorate in philosophy.

The next two proposed indicators capture underemployment based on individuals who are obliged to take jobs that are characterized by difficult working conditions, minimal remuneration, and minimal income security. The first indicator captures quality of work based on the main job performed over the last year, rather than the last week. Underemployment based on quality of work exists when a worker's job quality (of his or her main job) is below a specified threshold. Job quality is multi-dimensional and includes dimensions such as employment stability and social and legal protections; limits on working time; adequate income; ability to organize to negotiate workers' rights; opportunities through innovative means; and access to public infrastructure and benefits. Formal employment better captures these qualities than informal employment, to varying degrees. However, in this context, formal employment opportunities providing benefits such as job security, adequate income, and social and legal protections in the public and private sectors, are often limited and difficult to obtain (Roubaud and Torelli, 2013). Even for those with higher levels of education, underemployment and unemployment are the norm (Golub and Hayat, 2014). In Africa, given that formal-sector jobs are more likely to be held by older workers and that there is evidence of limited future job creation, youth are particularly affected (Golub and Hayat, 2014; AfDB *et al*., 2012).

However, even within informal employment, there are different levels of job quality. Some forms of informal employment may be preferred over formal employment (for example, informal jobs that result in higher pay and economic rewards than formal employment, but with greater risk and lack of legal and social security). Whereas other types of informal employment are taken out of necessity or as a last resort; they are the best alternative to unemployment in an environment where unemployment benefits are not provided.[6] Still other types of informal employment are taken because of a combination of both preference and necessity.

Conceptually, there is no clear divide between the informal sector and the formal sector, and definitions of informal employment vary. Informal employment as defined by the ILO is a concept based on jobs, capturing the quality of employment in a given economy. Informal employment as measured as part of the Decent Work framework (EMPL-4) includes own-account workers and employers employed in their own informal-sector enterprises; contributing family workers, irrespective of whether they work in formal- or informal-sector enterprises; members of informal producers' cooperatives; employees holding informal jobs in formal-sector

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[6] This is discussed in Kucera and Roncolato (2008).

enterprises, informal-sector enterprises, or as paid domestic workers employed by households (ILO, 2013).[7]

As national circumstances vary and the definition of informal employment is dynamic, informal employment is difficult to measure. As such, this paper proposes a measure of quality of work based on the most vulnerable workers that overlaps with EMPL-4, but that does not depend on a definition of informal employment. The most vulnerable workers are engaged in own-account employment, casual informal wage work, and contributing family work. Own-account work, in which individuals are engaged in survival-type activities – such as street vending – and casual, informal wage labour are likely to be characterized by a high degree of vulnerability, with minimal security and low pay. Contributing family work is classified as informal work irrespective of the formal or informal nature of the sector in which the work is done (ILO, 2013). This form of work is not directly remunerated and worker protections, conditions, and hours are more likely to depend on intrahousehold dynamics rather a formal legal framework or even an arranged informal agreement. Based on these considerations, an individual is considered underemployed if his or her main job over the last 12 months has been as a contributing family labourer; his or her main job has been a business in which he or she is not an employer and there is no fixed location where the goods are sold (as an example, products are sold on the street); or he or she has been employed in seasonal, casual, or short-term wage work that is based on a verbal contract with or without job entitlements.

The final measure of underemployment captures income insecurity resulting from the irregularity of work. An individual is considered underemployed if he or she is engaged in multiple seasonal or irregular income-earning activities throughout the year because of the lack of regular employment opportunities, or as a way to minimize vulnerability to income variability. This may be particularly the case in a developing country in which many rural households rely on agriculture and face seasonality and uncertainty in agricultural production. To capture underemployment, an individual is considered underemployed if he or she has held multiple income-earning activities because of irregular work and income insecurity,

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[7] As articulated in Resolution 1 of the Nineteenth ICLS concerning statistics of work, labour and employment underutilization, informal employment excludes own-account workers engaged in the production of goods exclusively for own final use by their household (available at: www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf).

or has held one income-earning activity and, in the last four weeks, looked for additional work.

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The Kenya context and description of the data

Agriculture contributes 26 percent of the Gross Domestic Product (GDP) of Kenya (FAO, n.d.). The population is largely rural and the majority of people rely on agriculture as a source of living (FAO, n.d.). The latest figures on poverty incidence from the 2015/2016 Kenya Integrated Household Budget Survey estimates that 36.1 percent of the population (or 16.4 million people) lives below the poverty line of KES[8] 3 252 (approximately 31 USD[9] in 2015) a month in rural and peri-urban areas, and KES 5 995 (approximately 58 USD in 2015) a month in urban core areas. Additionally, more than 8 percent of the population lives in extreme poverty, under the threshold of KES 1 954 (approximately 19 USD in 2015) a month in rural and peri-urban areas and KES 2 551 (approximately 24 USD in 2015) a month in urban core areas. Despite economic growth, unemployment and underemployment persists, and youth unemployment and underemployment are major issues (Omolo, 2010; Balwanz, 2012: pp. 69–91). Of the youth who are employed, many are engaged in vulnerable types of employment (Balwanz, 2012: pp. 69–91).

3.1. Description of the questionnaire and study area

The survey for the field test consisted of two parts: a household questionnaire and an individual questionnaire. The household questionnaire was administered to the household member who was best informed on the household and its agricultural activities, and included a household roster with demographic questions regarding each household member and questions on the characteristics of the dwelling, land held and cultivated, crops harvested, and livestock held.

The individual questionnaire, which comprised of detailed education, employment, and work modules, was administered to all individuals in the household aged 15 years and above. The questions, which covered the characteristics of the main job, temporary absence, job search, unemployment, time-related underemployment, and

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[8] Kenya Shilling.
[9] United States Dollar.

characteristics of the main job, were similar to those of the Quarterly Labour Force Survey of South Africa and two versions of the ILO Department of Statistics Labour Force Survey pilot questionnaires. However, unlike most labour force surveys, which typically ask about the main job and a secondary job, the individual questionnaire requested respondents to list all employment activities undertaken in the last 12 months.[10]

Specifically, the respondent was first asked to list any work done for a wage, salary, commission or payment of any kind and then list any businesses or income-earning activities, large or small, engaged in during the last year. Finally, the respondent was asked whether he or she has helped, without pay, in any kind of business run by his or her household or family or if he or she has helped a household member with his or her paid work in the last year. To help determine the main job and to capture time-related underemployment, the respondent was asked for his or her working hours each day over the last week for each employment activity. The individual questionnaire also included a module on subsistence agriculture, a section on the usual hours worked over the seasons, whether the respondent desired and was available for additional work, and the reasons for holding multiple jobs.[11]

Using Computer-Assisted Personal Interviewing (CAPI) software, data was collected in partnership with GSARS and the Kenyan Bureau of National Statistics (KBNS). The initial sample consisted of 540 households from 36 randomly selected enumeration areas in the counties of Machakos, Murang'a, and Kiambu near Nairobi, with 15 households per enumeration area (figure 1). Those counties were selected because the majority of households therein are agricultural producers. Many of the households in Murang'a and Kiambu counties grow short-term horticulture crops. Market activities for those households include selling horticulture on the Nairobi-Nyeri highway. The sample was not representative at the county level as it would have been cost-prohibitive to cover such an area, and some enumeration areas had to be excluded from the population prior to selection of the enumeration areas. A complete listing of the selected enumeration areas was done prior to conducting the survey and doing the sampling.

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[10] The definition of the main job was revised in the first resolution of the Nineteenth International Conference on Labour Statisticians to the job in which the person usually works the most hours even if absent in the short reference period.

[11] The CAPI version is publicly available on Survey Solutions Questionnaire Designer at: https://solutions.worldbank.org/questionnaire/details/5fd4b19e1bc544d2946413d1580e9141.

For individual questionnaires, enumerators were instructed to interview each eligible household member directly, as proxy responses can result in statistically different employment estimates than through self-responses (Bardasi *et al*., 2011). This, at times, required more than one visit to the household to conduct the interview. If it was not possible to individually interview all eligible household members after more than two visits, a proxy informant – who ideally knew the individual well – was asked to respond to the questions on that individual's behalf.

The final sample consisted of 1 073 individuals from 495 households. Ninety-two percent of the individuals self-reported their education, employment, and engagement in agriculture in the individual questionnaire. Fifty-six percent of the individuals were female and 59 percent were married, while 22 percent of them were youth aged 15 to 24 years.

Figure 1. Study area

Source: KNBS

Results and discussion

Nearly all households in the sample are agricultural households, in that they had either raised livestock or engaged in cropping activities in the last 12 months. For a majority of households, subsistence agriculture is a vital source of livelihood. Eighty-seven percent of the households had harvested crops over the last 12 months, and of that figure, 98 percent had harvested at least one crop primarily for household consumption. Slightly more than half (56 percent) of the households that had harvested crops sold at least some of their harvest.

Following Resolution I of the Nineteenth ICLS, own-use production is excluded from employment estimates. If subsistence agriculture from the past week had been included in the employment-to-population ratio, the ratio would have been 91 percent and the unemployment rate would have been almost zero.[12] Without subsistence agriculture, the employment-to-population ratio – which is the number of individuals who engaged in an employment activity in the last week for at least one hour or who were absent from employment in the last three months but intended to return to the job, with the exception of seasonal work –is 59 percent and the unemployment rate is 5 percent (figure 2). Forty-four percent of respondents are wage workers, 28 percent are business owners with employees, 21 percent are own-account workers, and 7 percent are contributing family workers.[13]

The majority of those employed based on the short reference period are employed in agriculture; 26 percent are employed in work that involves primarily simple routine tasks; and another 30 percent are engaged in skilled agricultural activities. The rest are primarily elementary workers employed outside of agriculture or as service or sales workers (such as cooks, waiters, hairdressers or beauticians, house- or groundkeepers), or as street, market, or shop salespersons, childcare workers or

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[12] Eighty-one percent of men and 89 percent of women engaged in some sort of subsistence agriculture in the last week, including cropping or preparing land for crops, rearing of livestock, fishing, hunting, and forestry production fetching water, or gathering fuel intended mainly for household consumption.

[13] Of those who are employed, 2 percent of them are temporarily absent from their job. For those who are temporarily absent, the main job is the job that the respondent stated was their main job over the last 12 months, based on the most time spent.

protective service officers. Four percent are craft or trade workers. Only 3 percent are managers or professionals, including nurses and primary school teachers.

In terms of underemployment, of those who are employed based on the short reference period of one week, 18 percent are time-related underemployed. These are individuals who have worked fewer than 28 hours in the last week in all paid and unpaid employment activities, are willing to work additional hours, and are available to do so.[14] A much larger share is skill-based underemployed. Forty-five percent of those employed are underemployed based on being overqualified. This means that their educational level based on the ISCED-97 classification exceeds the ISCO-08 skill level required for their main job, as determined by the short reference period.

A large majority of those employed are employed in multiple income-earning activities over the year as a way to ensure greater income security because of the seasonality of work in agriculture. The main job for the majority of employed individuals over the short reference period was in agriculture. For many, this was also the main job in the longer reference period.

The survey was administered at the end of the harvest season, after the long rainy season, and a number of individuals usually employed in agriculture and seasonal work were not employed based on the short reference period. The employment-to-population ratio is 72 percent when a reference period of one year is used – 14 percent higher than the employment-to-population ratio based on a reference period of one week – and of that percentage, 69 percent are employed in seasonal or agricultural jobs.

Using the long reference period, underemployment based on job quality is 29 percent. This suggests that nearly one-third of those employed over one year are engaged in vulnerable types of employment, such as contributing to family labour, survival-based business activities, or seasonal or casual wage work, as their main job over the year. Underemployment based on income insecurity is the greatest of these measures, corresponding to 54 percent.[15] This is because many people are

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[14] Respondents were asked the following questions: "Would you want to work more hours per week than you usually work, provided the extra hours were paid?" and "Could you start working more hours within the next two weeks?"

[15] These are people who have been engaged in multiple income-earning activities in the last 12 months or who currently have only one income-earning activity but who, in the past four weeks, have looked for additional or other work because they are unable to find full-time employment; their work is irregular or seasonal; or they took on work for reasons related to financial security. In 31

engaged in multiple income-earning activities over the long reference period (12 months) as a way to ensure income security. Figure 4 presents the indicators for the full sample.

For youth (15–24 years of age), the employment-to-population ratio is 27 percent and the unemployment rate is 11 percent, more than twice the unemployment rate for the full sample (see Figure 5). Eighteen percent of youth are NEET, of which the majority (59 percent) are female. In Kenya, the fertility rate is highest for women from 15 to 29 years of age, and engagement in caregiving activities is likely to affect the time available to female youth to engage in employment and educational activities; this is reflected in the NEET rate. Three fourths of youth engaged in own-use production work in agriculture in the last week. Only 2 percent of youth were either not employed, not in school or in not training and not engaged in own-use production of agriculture in the last week.

Similar to the full sample, the time-related underemployment measure is the lowest estimate of underemployment among youth (figure 6). Twenty-three percent of employed youth in the sample are time-related underemployed. Skill-based underemployment is substantially greater for youth than for the full population, reaching 64 percent of those employed. While youth are better educated than the older generation (85 percent have successfully completed pre-secondary or post-primary education and obtained the Kenya Certificate of Primary Education or a higher level certificate, compared to 65 percent of older people), the data suggest that there may be a lack of availability and access to job opportunities for their skill level (KNBS, 2015).

The youth employment-to-population ratio for the longer reference period is 43 percent – 16 percent higher than the employment-to-population ratio based on the short reference period – and of those employed, 47 percent hold a seasonal job and 39 percent are employed as contributing family labourers. Using the longer reference period (of 12 months), underemployment based on job quality is 57 percent, largely because of the large share of youth employed as contributing family labourers.

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percent of the sample, the module asking respondents for the reasons for holding multiple employment activities was not administered. Of those who were given the module, 99 percent indicated that they were involved in multiple employment activities because of income insecurity. As such, it was assumed that those who take on multiple income-earning activities do so because of income insecurity.

Underemployment based on income insecurity is 47 percent. This is lower for youth compared to the full population. This may be because youth are more likely to engage in only one employment activity compared to the older population, mainly because they generally are involved in other activities, such as formal education and skills development, as well as own-use production of goods and services (including caregiving).

In addition to the figures, table 1 presents the employment, unemployment, and underemployment estimates for the full population and for youth.

Figure 2. Employment and unemployment statistics based on the definitions adopted prior to and after the Nineteenth ICLS Resolution.
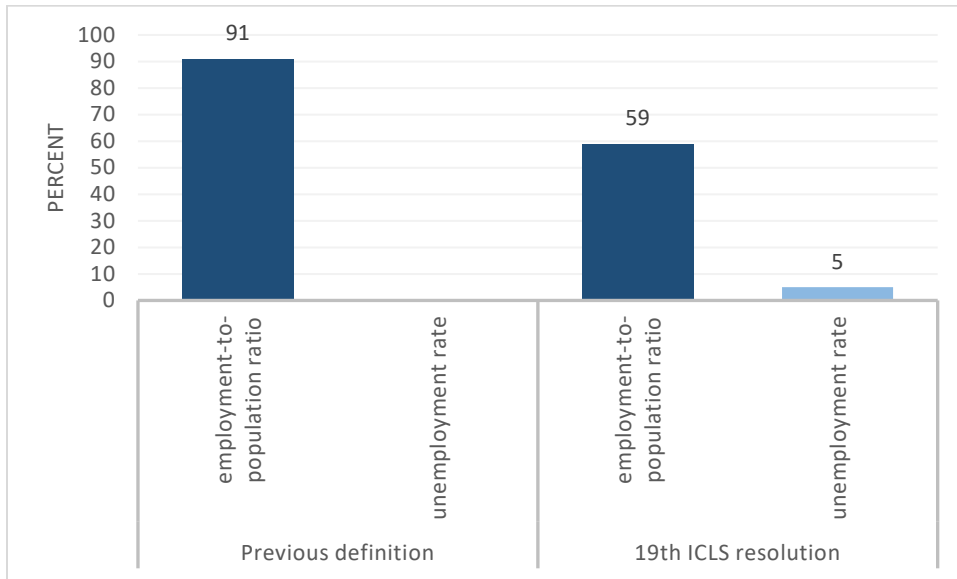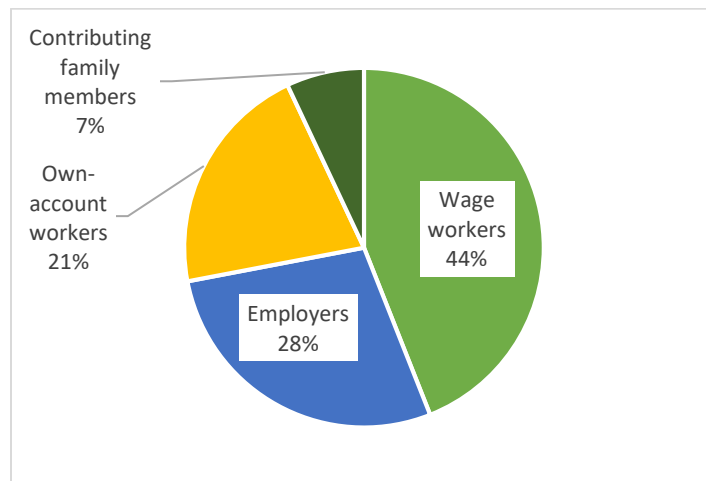

Figure 3. Employment status.

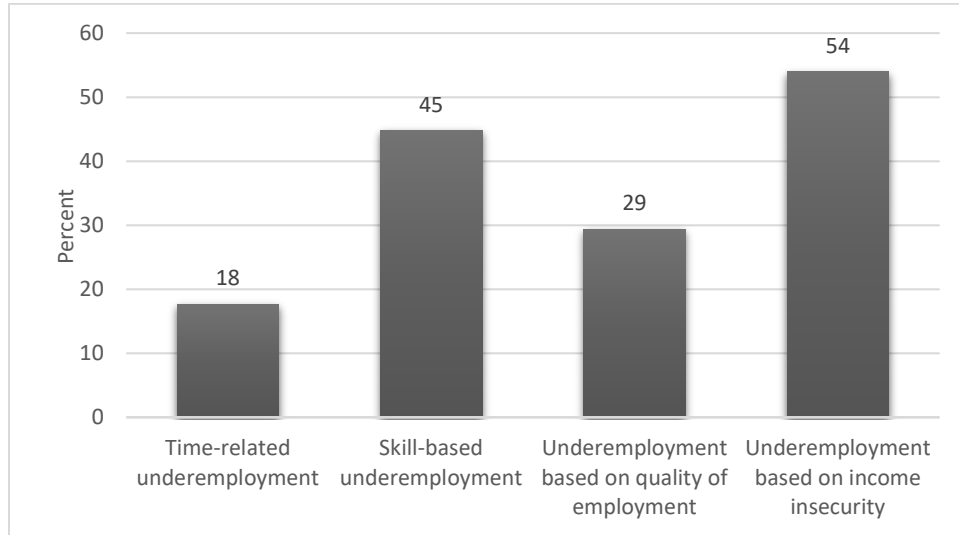**Figure 4. Underemployment indicators, full population.**
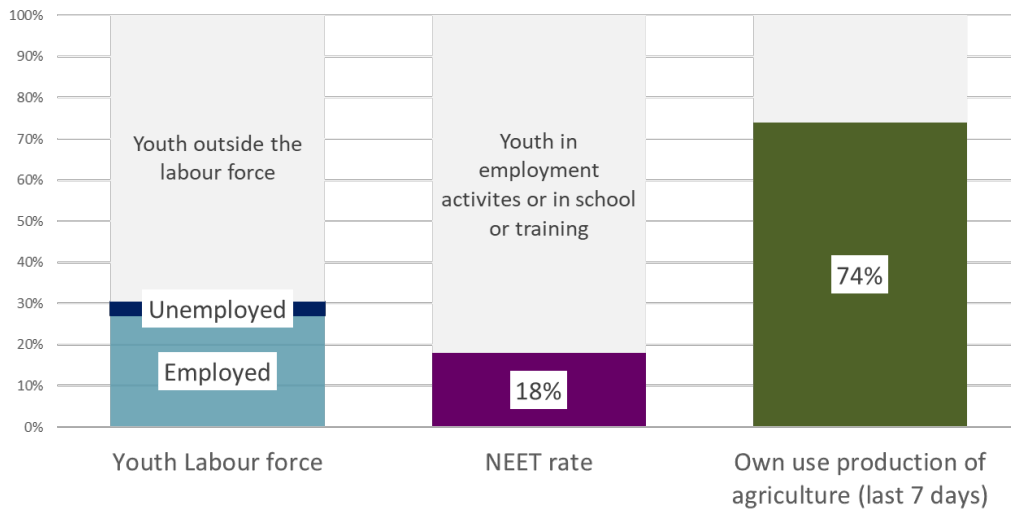

Figure 5. Youth statistics.

Figure 6. Underemployment indicators, youth.

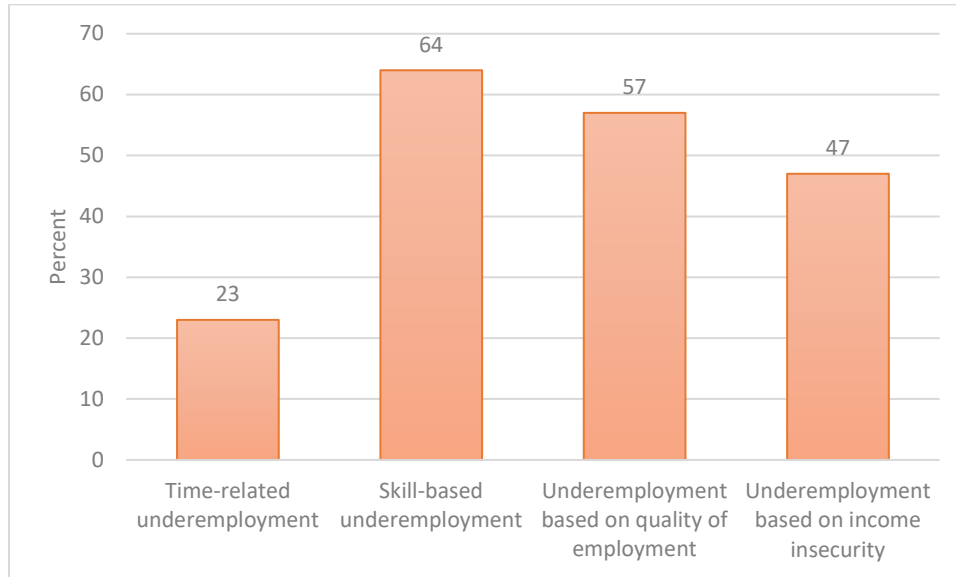**Table 1. Employment, unemployment, and underemployment headcount estimates.**

	All	Youth
Employment-to-population ratio, short reference period (%)	58.8	27.2
	(0.492)	(0.446)
Unemployment rate (%)	5.4	10.8
	(0.226)	(0.313)
Not employed or in educational or training activities (%)	-	18.1
	-	(0.386)
Time-related underemployment (%)	17.7	22.7
	(0.382)	(0.422)
Skill-based underemployment (%)	44.8	63.6
	(0.498)	(0.485)
Underemployment based on quality of employment (%)	29.4	56.7
	(0.456)	(0.497)
Underemployment based on income insecurity (%)	54.0	47.1
	(0.499)	(0.502)

Note: Standard deviations are in parentheses.

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Preliminary recommendations and conclusions

GSARS and KBNS have administered a survey in three counties near Nairobi where most households are engaged in agriculture. The survey captured information on the household's agricultural activities, as well as detailed information on individuals' employment and work activities over the last week and the last year. In addition to employment and unemployment estimates, four different measures of underemployment are estimated. One is a time-related underemployment measure, which is the share of individuals who worked fewer than 28 hours in the last week in all employment activities, were willing to work additional hours, and were available to do so. It is the only underemployment measure to date that has been agreed upon and properly defined within the international community of labour statisticians; it is already included in the Decent Work framework. Another measure is skill-based underemployment, which measures the share of individuals who are overqualified for their main job. This requires capturing detailed information about respondents' formal and informal education, training, and apprenticeships, and comparing their skill level to the skills required for their occupation.

The other two measures capture underemployment based on the individuals who are obligated to take on jobs with difficult working conditions, minimal remuneration, and minimal income security because unemployment is not an option. One is a quality-based measure, which is the share of individuals whose main job in the last 12 months has been (a) contributing family labour; (b) involvement in a business in which he or she is not an employer and there is no fixed location where the goods are sold, such as products sold on the street; or (c) seasonal, casual, or short-term wage work based on a verbal contract with or without job entitlements. It captures those engaged in the most vulnerable types of employment. The other is an income security measure in which underemployment is the share of those who have (a) held multiple income-earning activities because of irregular work and income insecurity

over the last 12 months; or (b) held one income-earning activity and, in the last four weeks, looked for additional work.

All four indicators are useful in depicting labour force performance. The time-related underemployment and skill-based underemployment indicators capture underutilization of labour across all levels of employment. On the other hand, the last two indicators – the measures based on the quality and security of employment – better describe employment at the bottom of the employment spectrum. They are proxies for those who would be unemployed if formal safety nets were in place and unemployment was an option. In contrast to what is presented here, in a high-income European country where unemployment benefits are provided, the unemployment rate would probably be higher and the estimates for the last two indicators would be smaller.

All four indicators require additional questions in labour force surveys. The time-related underemployment indicator (TIME-4) is already part of the Decent Work framework. The skill-based measure requires the most extensive additions to labour force surveys and is the most complicated to estimate. Both indicators are based on the main job done in the last week. It is assumed that the main job in the last week is the same throughout the year; thus, the indicators best fit in a context where regular employment is the norm. Even so, it is useful within a context such as Kenya, given that there has been a push for the skills development of youth as a way to promote youth employment.

While all four indicators are useful, the last two indicators, in particular, provide valuable additional information about employment and labour force performance within the context of a developing country where there is a large rural population, poverty is predominantly found in rural areas, and many rural households engage in agricultural production. These last two measures better capture underemployment in situations in which irregular, seasonal employment is the norm.

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